WHAT IS CLAIMED IS:

sub a7 1. A system for controlling distribution of video information over a network, comprising:

(a) a video data distribution unit comprising:

coding means for producing coded data by encoding source video signals based on performance level messages and error status messages,

dynamic traffic control means for dynamically controlling traffic of the coded data, thereby producing a video stream for distribution, and

video distribution means for distributing the produced video stream over the network; and

(b) a plurality of data terminals, each comprising:

performance level notification means for evaluating performance of said each data terminal and sending the performance report message to indicate the performance evaluated,

error status monitoring means for monitoring error status of said each data terminal and sending the error status message to said video data distribution unit when an error is detected, and

decoding means for adaptively decoding the video stream delivered thereto.

2. The system according to claim 1, wherein

said dynamic traffic control means determines a rate multiplier according to the performance level messages and error status messages, and dynamically varies the effective transfer rate of the coded data by applying the rate multiplier thereto.

3. The system according to claim 2, wherein said dynamic traffic control means determines the rate multiplier from at least one of:

supervisor events representing requests from a supervisor;

network events representing network status; and

client events representing status and requests from the data terminals.

4. The system according to claim 1, wherein said dynamic traffic control means separately controls the traffic for each distribution path.

5. The system according to claim 1, wherein said dynamic traffic control means has a timer with a predetermined interval, and varies the traffic in a stepwise manner, each time the predetermined interval expires.

6. The system according to claim 1, wherein said performance level reporting means sends the

performance level message containing information about resources that said each data terminal owns or benchmark scores that said each data terminal achieved.

7. The system according to claim 1, wherein:

said coding means operates either in interframe coding mode or in intraframe coding mode;

when the interframe coding mode is chosen, said coding means encodes differences between frames; and

when the intraframe coding mode is chosen, said coding means inserts an intra-coded frame into a series of interframe coded frames at regular intervals.

8. The system according to claim 7, wherein said coding means chooses the intraframe coding mode when the performance level messages indicate that there is a data terminal with insufficient performance.

9. The system according to claim 7, wherein said coding means chooses the intraframe coding mode when the error status messages indicate that intolerably frequent errors have been detected.

10. The system according to claim 8, wherein said decoding means in the data terminal with insufficient performance reproduces a subsampled video stream by selectively decoding the intra-coded frames out of the

~~received video stream~~

11. The system according to claim 9, wherein said decoding means selectively decodes the intra-coded frames out of the received video stream, when intolerably frequent errors have been detected.

12. The system according to claim 1, further comprising program data sending means for providing information on what video programs are distributed.

13. A video data distribution unit which distributes video information to a plurality of data terminals over a network, comprising:

coding means for producing coded data by encoding source video signals, based on performance level messages and error status messages received from the data terminals;

dynamic traffic control means for dynamically controlling traffic of the coded data, thereby producing a video stream for distribution; and

video distribution means for distributing the produced video stream over the network.

14. A data terminal which replays video information delivered over a network, comprising:

performance level notification means for

evaluating performance of the data terminal and sending a performance report message to indicate the performance evaluated;

error status monitoring means for monitoring error status of the data terminal and sending an error status message; and

decoding means for adaptively decoding a video stream delivered thereto.

15. A method of controlling distribution of video information to a plurality of data terminals over a network, comprising the steps of:

(a) sending a performance level message from each data terminal to indicate performance of the sending data terminal itself;

(b) sending an error status message from each data terminal when the sending data terminal encounters an error;

(c) producing coded data by encoding source video signals, based on information contained in the performance level messages and error status messages received from the data terminals;

(d) producing a video stream by dynamically controlling traffic of the coded data;

(e) distributing the produced video stream to the data terminals over the network; and

(f) adaptively decoding the received video

stream at the data terminals.

16. The method according to claim 15, wherein:

said step (c) of producing the coded data is performed either in interframe coding mode or in intraframe coding mode;

when the interframe coding mode is chosen, said step (c) encodes differences between frames; and

when the intraframe coding mode is chosen, said step (c) inserts an intra-coded frame into a series of interframe coded frames at regular intervals.

17. The method according to claim 16, wherein the intraframe coding mode is chosen when the received performance level messages indicate that there is a data terminal with insufficient performance.

18. The method according to claim 16, wherein the intraframe coding mode is chosen when the received error status messages indicate that intolerably frequent errors have been detected.

19. The method according to claim 17, wherein said step (f) of adaptively decoding reproduces a subsampled video stream by selectively decoding the intra-coded frames out of the received video stream, when said step (f) is executed in the data terminal with

insufficient performance.

20. The method according to claim 18, wherein said step (f) of adaptively decoding selectively decodes the intra-coded frames out of the received video stream, when intolerably frequent errors have been detected.